



STATE OF MISSOURI
MISSOURI DEPARTMENT OF NATURAL RESOURCES
GEOLOGICAL SURVEY PROGRAM

APPLICATION FOR PERMIT TO DRILL, DEEPEN OR PLUG BACK

CONFIDENTIAL RECEIVED

release 8-12-09
2010

JUL 30 2009

FORM OGC-3

<input checked="" type="checkbox"/> APPLICATION TO DRILL <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> FOR AN OIL WELL <input type="checkbox"/> OR GAS WELL																																			
NAME OF COMPANY OR OPERATOR OSBORN ENERGY, LLC			DATE 7/30/2009																																
ADDRESS 24850 FARLEY		CITY BUCYRUS	STATE KS ZIP CODE 66013																																
DESCRIPTION OF WELL AND LEASE																																			
NAME OF LEASE Scott		WELL NUMBER 1-23	ELEVATION (GROUND) 1030																																
WELL LOCATION (GIVE FOOTAGE FROM SECTION LINES)																																			
2150 ft. from <input checked="" type="checkbox"/> North <input type="checkbox"/> South section line 170 ft. from <input checked="" type="checkbox"/> East <input type="checkbox"/> West section line																																			
WELL LOCATION Sec. 23 Township 42 North Range 33 <input type="checkbox"/> East <input checked="" type="checkbox"/> West		LATITUDE	LONGITUDE																																
		COUNTY Bates																																	
NEAREST DISTANCE FROM PROPOSED LOCATION TO PROPERTY OR LEASE LINE 170 FEET																																			
DISTANCE FROM PROPOSED LOCATION TO NEAREST DRILLING, COMPLETED OR APPLIED - FOR WELL ON THE SAME LEASE 320 FEET																																			
PROPOSED DEPTH 600	DRILLING CONTRACTOR, NAME AND ADDRESS OSBORN ENERGY, LLC BUCYRUS, KS		ROTARY OR CABLE TOOLS APPROX. DATE WORK WILL START 8/4/2009																																
NUMBER OF ACRES IN LEASE 80	NUMBER OF WELLS ON LEASE INCLUDING THIS WELL, COMPLETED IN OR DRILLING TO THIS RESERVOIR 1 NUMBER OF ABANDONED WELLS ON LEASE 0																																		
IF LEASE PURCHASED WITH ONE OR MORE WELLS DRILLED, FROM WHOM PURCHASED? NAME _____ ADDRESS _____		NO. OF WELLS PRODUCING <input type="checkbox"/> INJECTION <input type="checkbox"/> INACTIVE <input type="checkbox"/> ABANDONED <input type="checkbox"/>																																	
STATUS OF BOND		<input type="checkbox"/> SINGLE WELL AMOUNT \$ _____ <input checked="" type="checkbox"/> BLANKET BOND AMOUNT \$ 30000.00 <input checked="" type="checkbox"/> ON FILE <input type="checkbox"/> ATTACHED																																	
REMARKS: (IF THIS IS AN APPLICATION TO DEEPEN OR PLUG BACK, BRIEFLY DESCRIBE WORK TO BE DONE, GIVING PRESENT PRODUCING/INJECTION ZONE AND EXPECTED NEW INJECTION ZONE; USE BACK OF FORM IF NEEDED)																																			
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4">PROPOSED CASING PROGRAM</th> <th colspan="4">APPROVED CASING - TO BE FILLED IN BY STATE GEOLOGIST</th> </tr> <tr> <th>AMOUNT</th> <th>SIZE</th> <th>WT/FT</th> <th>CEMENT</th> <th>AMOUNT</th> <th>SIZE</th> <th>WT/FT</th> <th>CEMENT</th> </tr> </thead> <tbody> <tr> <td>20'</td> <td>7"</td> <td></td> <td>Portland</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>600'</td> <td>2 7/8"</td> <td></td> <td>Portland</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				PROPOSED CASING PROGRAM				APPROVED CASING - TO BE FILLED IN BY STATE GEOLOGIST				AMOUNT	SIZE	WT/FT	CEMENT	AMOUNT	SIZE	WT/FT	CEMENT	20'	7"		Portland					600'	2 7/8"		Portland				
PROPOSED CASING PROGRAM				APPROVED CASING - TO BE FILLED IN BY STATE GEOLOGIST																															
AMOUNT	SIZE	WT/FT	CEMENT	AMOUNT	SIZE	WT/FT	CEMENT																												
20'	7"		Portland																																
600'	2 7/8"		Portland																																
I, the Undersigned, state that I am the agent of the Osborn Energy, LLC (Company), and that I am authorized by said company to make this report, and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct, and complete to the best of my knowledge.																																			
SIGNATURE <i>Curtis Hanberry</i>			DATE 7-30-09																																
PERMIT NUMBER 20386		<input checked="" type="checkbox"/> DRILLER'S LOG REQUIRED <input checked="" type="checkbox"/> E-LOGS REQUIRED IF RUN <input checked="" type="checkbox"/> CORE ANALYSIS REQUIRED IF RUN <input checked="" type="checkbox"/> DRILL SYSTEM TEST INFO REQUIRED IF RUN <input checked="" type="checkbox"/> SAMPLES REQUIRED 10' cuttings <input type="checkbox"/> SAMPLES NOT REQUIRED <input type="checkbox"/> WATER SAMPLES REQUIRED AT _____																																	
APPROVED DATE 8-12-09																																			
APPROVED BY <i>Joseph A. Williams</i>																																			
NOTE ▶ THIS PERMIT NOT TRANSFERABLE TO ANY OTHER PERSON OR TO ANY OTHER LOCATION.																																			
APPROVAL OF THIS PERMIT BY THE OIL AND GAS COUNCIL DOES NOT CONSTITUTE ENDORSEMENT OF THE GEOLOGIC MERITS OF THE PROPOSED WELL NOR ENDORSEMENT OF THE QUALIFICATIONS OF THE PERMITTEE																																			
I, _____ of the _____ (Company), confirm that an approved drilling permit has been obtained by the owner of this well. Council approval of this permit will be shown on this form by presence of a permit number and signature of authorized council representative.																																			
DRILLER'S SIGNATURE			DATE																																

RECEIVED

003



STATE OF MISSOURI
MISSOURI DEPARTMENT OF NATURAL RESOURCES
GEOLOGICAL SURVEY PROGRAM
WELL LOCATION PLAT

JUL 30 2009

FORM OGC-4

Mo Oil & Gas Council

OWNER'S NAME

OSBORN ENERGY, LLC

LEASE NAME

Scott 1-23

#20386

COUNTY

Bates

WELL LOCATION

(GIVE FOOTAGE FROM SECTION LINES)

2150 ft. from ☒ North ☐ South from section line 170 ft. from ☒ East ☐ West from section line

WELL LOCATION

Sec. 23 Township 42 North Range 33 ☐ East ☒ West

LATITUDE

LONGITUDE

Drexel Acad.

~~~~~ LEASE LINE  
/// SECTION LINE



REMARKS

**INSTRUCTIONS**

On the above plat, show distance of the proposed well from the two nearest section lines, the nearest lease line, and from the nearest well on the same lease completed in or drilling to the same reservoir. Do not confuse survey lines with lease lines. See rule 10 CSR 50-2.030 for survey requirements. Lease lines must be marked.

This is to certify that I have executed a survey to accurately locate oil and gas wells in accordance with 10 CSR 50-2.030 and that the results are correctly shown on the above plat.

REGISTERED LAND SURVEY

NUMBER



24850 Farley, Bucyrus, KS 66013  
Phone 913.533.9900 Fax 913.533.9955

8/13/2009

Geological Survey Program  
P.O. Box 250  
Rolla, MO 65402

Dear Commissioners,

Osborn Energy, LLC, having its principal place of business at 24850 Farley, Bucyrus, KS 66013 is requesting that the Geological Survey Program keep all information for the following well confidential for the maximum amount of time allowed.

LEASE NAME: Scott WELL #: 1-23

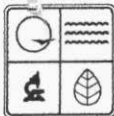
Permit #: 20386

|                   |                   |                   |
|-------------------|-------------------|-------------------|
| Sec               | Tw                | Rng               |
| <u>23</u>         | <u>42N</u>        | <u>33W</u>        |
| <u>          </u> | <u>          </u> | <u>          </u> |

Sincerely,

*Curstin Hamblin*

Curstin Hamblin  
Geologist  
Osborn Energy, LLC.



STATE OF MISSOURI  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM

CONFIDENTIAL

SEP 03 2009

FORM OGC-5

WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

|                                                                                                                                                                                                                                                                                                                                                                             |                                          |                                                                                          |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------|-----------|
| <input checked="" type="checkbox"/> NEW WELL <input type="checkbox"/> WORKOVER <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> INJECTION <input type="checkbox"/> SAME RESERVOIR <input type="checkbox"/> DIFFERENT RESERVOIR <input checked="" type="checkbox"/> OIL <input type="checkbox"/> GAS <input type="checkbox"/> DRY |                                          |                                                                                          |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |
| OWNER<br>Osborn Energy, LLC                                                                                                                                                                                                                                                                                                                                                 |                                          |                                                                                          |                                                                                                                    | ADDRESS<br>24850 Farley Bucyrus, KS 66013                                                         |                                                    |                                                                                                                                                                            |                                        |                            |           |
| LEASE NAME<br>Scott                                                                                                                                                                                                                                                                                                                                                         |                                          |                                                                                          |                                                                                                                    | WELL NUMBER<br>1-23                                                                               |                                                    |                                                                                                                                                                            |                                        |                            |           |
| LOCATION OF WELL                                                                                                                                                                                                                                                                                                                                                            |                                          | SEC TWN RNG                                                                              |                                                                                                                    | OR                                                                                                |                                                    | BLOCK AND SURVEY                                                                                                                                                           |                                        | LATITUDE                   | LONGITUDE |
| Sec. 23 Twp 42 North, Rng 33                                                                                                                                                                                                                                                                                                                                                |                                          | <input type="checkbox"/> East <input checked="" type="checkbox"/> West                   |                                                                                                                    | OR                                                                                                |                                                    | 2150 ft. from <input checked="" type="checkbox"/> North <input type="checkbox"/> South 170 ft. from <input checked="" type="checkbox"/> East <input type="checkbox"/> West |                                        |                            |           |
| COUNTY<br>Bates                                                                                                                                                                                                                                                                                                                                                             | PERMIT NUMBER (OGC-3 OR OGC-31)<br>20386 |                                                                                          |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |
| DATE SPUDDED<br>8/5/2009                                                                                                                                                                                                                                                                                                                                                    | DATE TOTAL DEPTH REACHED<br>8/6/2009     |                                                                                          | DATE COMPLETED READY TO PRODUCE OR INJECT                                                                          |                                                                                                   | ELEVATION (DF, RKR, RT, OR Gr.)<br>FEET<br>1030    |                                                                                                                                                                            | ELEVATION OF CASING HD. FLANGE<br>FEET |                            |           |
| TOTAL DEPTH<br>499                                                                                                                                                                                                                                                                                                                                                          | PLUG BACK TOTAL DEPTH<br>NA              |                                                                                          |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |
| PRODUCING OR INJECTION INTERVAL(S) FOR THIS COMPLETION<br>436-444                                                                                                                                                                                                                                                                                                           |                                          |                                                                                          |                                                                                                                    | ROTARY TOOLS USED (INTERVAL)<br>0 TO 499<br>DRILLING FLUID USED Air                               |                                                    |                                                                                                                                                                            | CABLE TOOLS USED (INTERVAL)            |                            |           |
| WAS THIS WELL DIRECTIONALLY DRILLED?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                                                                                                                                                                                 |                                          | WAS DIRECTIONAL SURVEY MADE?<br><input type="checkbox"/> Yes <input type="checkbox"/> No |                                                                                                                    | WAS COPY OF DIRECTIONAL SURVEY FILED?<br><input type="checkbox"/> Yes <input type="checkbox"/> No |                                                    | DATE FILED                                                                                                                                                                 |                                        |                            |           |
| TYPE OF ELECTRICAL OR OTHER LOGS RUN (JUST LOGS FILED WITH THE STATE GEOLOGIST)<br>Gamma Ray Neutron/CCL                                                                                                                                                                                                                                                                    |                                          |                                                                                          |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            | DATE FILED<br>8/31/2009                |                            |           |
| <b>CASING RECORD</b>                                                                                                                                                                                                                                                                                                                                                        |                                          |                                                                                          |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |
| CASING (REPORT ALL STRINGS SET IN WELL - CONDUCTOR, SURFACE, INTERMEDIATE, PRODUCING, ETC.)                                                                                                                                                                                                                                                                                 |                                          |                                                                                          |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |
| PURPOSE                                                                                                                                                                                                                                                                                                                                                                     | SIZE HOLE DRILLED                        | SIZE CASING SET                                                                          | WEIGHT (LB. FT)                                                                                                    | DEPTH SET                                                                                         | SACKS CEMENT                                       | AMOUNT PULLED                                                                                                                                                              |                                        |                            |           |
| Surface                                                                                                                                                                                                                                                                                                                                                                     | 9 1/4"                                   | 7"                                                                                       |                                                                                                                    | 20'                                                                                               | 3                                                  | 0                                                                                                                                                                          |                                        |                            |           |
| Production                                                                                                                                                                                                                                                                                                                                                                  | 6 1/4"                                   | 2 7/8"                                                                                   |                                                                                                                    | 476.58                                                                                            | 78                                                 | 0                                                                                                                                                                          |                                        |                            |           |
|                                                                                                                                                                                                                                                                                                                                                                             |                                          |                                                                                          |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |
| <b>TUBING RECORD</b>                                                                                                                                                                                                                                                                                                                                                        |                                          |                                                                                          |                                                                                                                    |                                                                                                   | <b>LINER RECORD</b>                                |                                                                                                                                                                            |                                        |                            |           |
| SIZE<br>INCH                                                                                                                                                                                                                                                                                                                                                                | DEPTH SET<br>FEET                        | PACKER SET AT<br>FEET                                                                    | SIZE<br>INCH                                                                                                       | TOP<br>FEET                                                                                       | BOTTOM<br>FEET                                     | SACKS CEMENT                                                                                                                                                               | SCREEN<br>FEET                         |                            |           |
| <b>PERFORATION RECORD</b>                                                                                                                                                                                                                                                                                                                                                   |                                          |                                                                                          |                                                                                                                    |                                                                                                   | <b>ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD</b> |                                                                                                                                                                            |                                        |                            |           |
| NUMBER PER FOOT                                                                                                                                                                                                                                                                                                                                                             | SIZE AND TYPE                            | DEPTH INTERVAL                                                                           | AMOUNT AND KIND OF MATERIAL USED                                                                                   |                                                                                                   |                                                    | DEPTH INTERVAL                                                                                                                                                             |                                        |                            |           |
| 2 perfs                                                                                                                                                                                                                                                                                                                                                                     | 2" DML RTG                               | 436-444                                                                                  | 75 acid, 40 sx sand                                                                                                |                                                                                                   |                                                    | 436-444                                                                                                                                                                    |                                        |                            |           |
|                                                                                                                                                                                                                                                                                                                                                                             |                                          |                                                                                          |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |
| <b>INITIAL PRODUCTION</b>                                                                                                                                                                                                                                                                                                                                                   |                                          |                                                                                          |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |
| DATE OF FIRST PRODUCTION OR INJECTION<br>8/27/2009                                                                                                                                                                                                                                                                                                                          |                                          |                                                                                          | PRODUCING METHOD (INDICATE IF FLOWING, GAS LIFT, OR PUMPING - IF PUMPING, SHOW SIZE AND TYPE OF PUMP.)<br>pumping- |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |
| DATE OF TEST<br>8-27-09                                                                                                                                                                                                                                                                                                                                                     | HOURS TESTED<br>24                       | CHOKE SIZE                                                                               | OIL PRODUCED DURING TEST<br>0 BBLS                                                                                 | GAS PRODUCED DURING TEST<br>NA MCF                                                                |                                                    | WATER PRODUCED DURING TEST<br>20 BBLS                                                                                                                                      |                                        | OIL GRAVITY<br>API (CORR.) |           |
| TUBING PRESSURE                                                                                                                                                                                                                                                                                                                                                             | CASING PRESSURE                          | CALCULATED RATE OF PRODUCTION PER 24 HOURS                                               |                                                                                                                    | OIL<br>BBLS                                                                                       | GAS<br>MCF                                         | WATER<br>BBLS                                                                                                                                                              |                                        | GAS OIL RATIO              |           |
| DISPOSITION OF GAS (STATE WHETHER VENTED, USED FOR FUEL OR SOLD)<br>NA                                                                                                                                                                                                                                                                                                      |                                          |                                                                                          |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |
| METHOD OF DISPOSAL OF MUD PIT CONTENTS<br>Drilled with air- let water evaporate, then fill in pit                                                                                                                                                                                                                                                                           |                                          |                                                                                          |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |
| <b>CERTIFICATE:</b> I, the Undersigned, state that I am the <u>Geologist</u> of the <u>OELLC</u> (Company), and that I am authorized by said company to make this report, and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.                                |                                          |                                                                                          |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |
| DATE<br>8-31-09                                                                                                                                                                                                                                                                                                                                                             |                                          | SIGNATURE<br><i>Curtis Hansen</i>                                                        |                                                                                                                    |                                                                                                   |                                                    |                                                                                                                                                                            |                                        |                            |           |

**INSTRUCTIONS:** Attach drillers log or other acceptable log of well.

- \* Show all important zones of porosity, detail of all cores, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

**DETAIL OF FORMATIONS PENETRATED**

| FORMATION | TOP | BOTTOM | DESCRIPTION (SEE * ABOVE)                                            |
|-----------|-----|--------|----------------------------------------------------------------------|
|           |     |        | See Georeport<br><br>RECEIVED<br>SEP 03 2009<br>Mo Oil & Gas Council |



**CONSOLIDATED**  
Oil Well Services, LLC

RECEIVED

PO Box 884, Chanute, KS 66720  
620-431-9210 or 800-467-8676

SEP 08 2009  
**TREATMENT REPORT**  
**FRAC & ACID**

TICKET NUMBER 45878  
FIELD TICKET REF # 40251  
LOCATION Mo Oil & Gas Council  
FOREMAN 1-11-09

| DATE            | CUSTOMER # | WELL NAME & NUMBER   | SECTION | TOWNSHIP | RANGE | COUNTY |
|-----------------|------------|----------------------|---------|----------|-------|--------|
|                 | 6073       | Mo Oil & Gas Council | 23      | 42       |       |        |
| CUSTOMER        |            |                      | TRUCK # |          |       |        |
| MAILING ADDRESS |            |                      | DRIVER  |          |       |        |
| CITY            |            |                      | TRUCK # |          |       |        |
| STATE           |            |                      | DRIVER  |          |       |        |
| ZIP CODE        |            |                      |         |          |       |        |

| WELL DATA         |              |
|-------------------|--------------|
| CASING SIZE       | TOTAL DEPTH  |
| CASING WEIGHT     | PLUG DEPTH   |
| TUBING SIZE       | PACKER DEPTH |
| TUBING WEIGHT     | OPEN HOLE    |
| PERFS & FORMATION |              |
| 936-44            | 2000         |

| TYPE OF TREATMENT |      |
|-------------------|------|
| 2000 / 2000       |      |
| CHEMICALS         |      |
| 1000              | 75   |
| 2000              | 1.75 |
| 1000              | 1.75 |
| 1000              | 1.75 |

| STAGE | BBL'S PUMPED | INJ RATE | PROPPANT PPG | SAND / STAGE | PSI |                   |
|-------|--------------|----------|--------------|--------------|-----|-------------------|
| 1000  |              |          |              |              |     | BREAKDOWN 1900    |
| 2000  |              |          |              | 200          |     | START PRESSURE    |
| 1000  |              |          |              | 1700         |     | END PRESSURE      |
| 1000  |              |          |              |              |     | BALL OFF PRESS    |
| 1000  |              |          |              | 2000         |     | ROCK SALT PRESS   |
| 1000  |              |          |              |              |     | ISIP 375          |
| 1000  |              |          |              |              |     | 5 MIN             |
| 1000  |              |          |              |              |     | 10 MIN            |
| 1000  |              |          |              |              |     | 15 MIN            |
|       |              |          |              |              |     | MIN RATE          |
|       | 130          |          |              | 4000         |     | MAX RATE          |
|       |              |          |              |              |     | DISPLACEMENT 2500 |
|       |              |          |              |              |     |                   |
|       |              |          |              |              |     |                   |

REMARKS:

AUTHORIZATION 1-11-09 TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Pump-15



FOREMAN Fred Mader

**CONSOLIDATED**

**Oil Well Services, LLC**

**PO Box 884, Chanute, KS 66720**

620-431-9210 or 800-467-8676

## FIELD TICKET & TREATMENT REPORT

## CEMENT

Missouri

|                   |  |            |  |                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |          |  |       |  |        |  |         |  |        |  |         |  |        |  |     |  |      |  |  |  |  |  |     |  |       |  |  |  |  |  |     |  |       |  |  |  |  |  |
|-------------------|--|------------|--|--------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------|--|-------|--|--------|--|---------|--|--------|--|---------|--|--------|--|-----|--|------|--|--|--|--|--|-----|--|-------|--|--|--|--|--|-----|--|-------|--|--|--|--|--|
| DATE              |  | CUSTOMER # |  | WELL NAME & NUMBER |  | SECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | TOWNSHIP |  | RANGE |  | COUNTY |  |         |  |        |  |         |  |        |  |     |  |      |  |  |  |  |  |     |  |       |  |  |  |  |  |     |  |       |  |  |  |  |  |
| 8/12/09           |  | 6073       |  | Scott              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |          |  |       |  | Bates  |  |         |  |        |  |         |  |        |  |     |  |      |  |  |  |  |  |     |  |       |  |  |  |  |  |     |  |       |  |  |  |  |  |
| CUSTOMER          |  |            |  |                    |  | <table border="1"> <tr> <td colspan="2">TRUCK #</td> <td colspan="2">DRIVER</td> <td colspan="2">TRUCK #</td> <td colspan="2">DRIVER</td> </tr> <tr> <td colspan="2">506</td> <td colspan="2">Fred</td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2">495</td> <td colspan="2">Casey</td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2">510</td> <td colspan="2">Arden</td> <td colspan="2"></td> <td colspan="2"></td> </tr> </table> |  |          |  |       |  |        |  | TRUCK # |  | DRIVER |  | TRUCK # |  | DRIVER |  | 506 |  | Fred |  |  |  |  |  | 495 |  | Casey |  |  |  |  |  | 510 |  | Arden |  |  |  |  |  |
| TRUCK #           |  | DRIVER     |  | TRUCK #            |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |          |  |       |  |        |  | DRIVER  |  |        |  |         |  |        |  |     |  |      |  |  |  |  |  |     |  |       |  |  |  |  |  |     |  |       |  |  |  |  |  |
| 506               |  | Fred       |  |                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |          |  |       |  |        |  |         |  |        |  |         |  |        |  |     |  |      |  |  |  |  |  |     |  |       |  |  |  |  |  |     |  |       |  |  |  |  |  |
| 495               |  | Casey      |  |                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |          |  |       |  |        |  |         |  |        |  |         |  |        |  |     |  |      |  |  |  |  |  |     |  |       |  |  |  |  |  |     |  |       |  |  |  |  |  |
| 510               |  | Arden      |  |                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |          |  |       |  |        |  |         |  |        |  |         |  |        |  |     |  |      |  |  |  |  |  |     |  |       |  |  |  |  |  |     |  |       |  |  |  |  |  |
| MAILING ADDRESS   |  |            |  |                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |          |  |       |  |        |  |         |  |        |  |         |  |        |  |     |  |      |  |  |  |  |  |     |  |       |  |  |  |  |  |     |  |       |  |  |  |  |  |
| Osborn Energy LLC |  |            |  |                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |          |  |       |  |        |  |         |  |        |  |         |  |        |  |     |  |      |  |  |  |  |  |     |  |       |  |  |  |  |  |     |  |       |  |  |  |  |  |
| 24850 Farley      |  |            |  |                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |          |  |       |  |        |  |         |  |        |  |         |  |        |  |     |  |      |  |  |  |  |  |     |  |       |  |  |  |  |  |     |  |       |  |  |  |  |  |
| CITY              |  | STATE      |  | ZIP CODE           |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |          |  |       |  |        |  |         |  |        |  |         |  |        |  |     |  |      |  |  |  |  |  |     |  |       |  |  |  |  |  |     |  |       |  |  |  |  |  |
| Bucyrus           |  | KS         |  | 66013              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |          |  |       |  |        |  |         |  |        |  |         |  |        |  |     |  |      |  |  |  |  |  |     |  |       |  |  |  |  |  |     |  |       |  |  |  |  |  |

JOB TYPE Long string HOLE SIZE 6 1/4 HOLE DEPTH 488' CASING SIZE & WEIGHT 27 1/2" EUE  
 CASING DEPTH 475 DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT \_\_\_\_\_ SLURRY VOL \_\_\_\_\_ WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 2 1/2" Plug  
 DISPLACEMENT 2.8 BBL DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE 43 BPM

REMARKS: Establish Circulation. Mix + Pump 100 # Premium  
Flush. Mix + Pump 78 sks OWC Cement  $\frac{1}{4}$  # Floeal per sack  
Cement to surface. Flush pump + lines clean. Displace  
 $2\frac{1}{2}$ " Rubber plug to casing TD w/ 2.8 BBL fresh water.  
Pressure to 700 # PSI. Release pressure to set Float  
Valve. Shut in casing.

Customer Supplied H<sub>2</sub>O

Fred Maden

[illegible]

Ravin 3737

## AUTHORIZATION

**TITLE**

DATE \_\_\_\_\_



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SEP 03 2009

Geological Report

Mo Oil & Gas Council

Scott # 1-23

2150 FNL, 170 FEL

Section: 23-T42-R33W

Bates Co., Missouri

Permit #: 20386

Elevation: 1030' GL

Drilling Contractor: Osborn Energy, L.L.C (Lic. # 32294)

Spud: 8/5/2009

Production Bore Hole: 6 1/4"

Rotary Total Depth: 499 on 8/6/2009

Drilling Fluid: air

Surface Csg.: 7"

Production Csg.: 2 7/8" 476.58'

Geologist: Curstin Hamblin

Driller: Brian Schwab

| Formation                        | Driller Log Tops | Datum |
|----------------------------------|------------------|-------|
| Stark Shale                      | None             |       |
| Hushpuckney Shale                | None             |       |
| Base Kansas City                 | No call          |       |
| Knobtown Sand                    | 49               |       |
| Carbonaceous Zone in Tacket Fm.  | No call          |       |
| "Big Lake" Sand                  | NO call          |       |
| South Mound Zone                 | 151'             | 879   |
| Hepler (Wayside) Sand            | No call          |       |
| "Upper" Mulberry Zone            | No call          |       |
| Mulberry Zone                    | No call          |       |
| Weiser Sand                      | No call          |       |
| Myrick Station                   | 307-309'         | 723   |
| Anna Shale (Lexington Coal Zone) | 310-313'         | 720   |
| Peru Sand                        | No call          |       |
| Summit Shale Zone                | 359-360'         | 671   |
| Mulky Coal/Shale Zone            | No call          |       |
| Squirrel Sand                    | 379-348'         | 651   |
| Bevier Zone                      | 451-452'         | 579   |
| Croweburg Zone                   | 464-466'         | 566   |
| Fleming Zone                     | 472              | 558   |
| Rotary Total Depth               | 499'             |       |





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Drilling at 39' in the Kansas City on 8/6/2009 at 6:30am  
Background Gas (BG) 18.9 units

Mo Oil & Gas Council

39-48: LS: white, tan, SS: lt grey, small grained, partially gummy  
49-58: SS: lt grey, small grained, gummy  
59-68: SS: grey, small grained, gummy, speckled  
69-78: SS: grey, very small grained, speckled  
79-88: SS: very fine grained, gummy, Pyrite  
89-98: Siltstone: grey, gummy  
99-108: Siltstone: grey, gummy  
109-118: SH: grey, gummy  
119-128: SH: grey, gummy  
129-138: SH: grey, gummy  
139-148: SH: grey, gummy

**SOUTH MOUND ZONE** Geologist called @151', gas kick of 0 units over BG

149-158: SS: grey, small grained, SH: grey, gummy

151: SH: dk grey (south Mound?)

159-168: SH: grey, gummy, silty, SS: small grained, tan, angular

169-178: SH: red, SH: grey

179-188: SH: grey, sandy, gummy

189-198: SH: grey, SH: red

199-208: SH: grey, gummy, silty

209-218: SS: grey, gummy, small grained

CG: 60 units

Switching to water before we drill into the oil

219-238:

223: Sand

224: Sand, very poor breakout oil, greasy

225: Sand: grey, medium grained, greasy, Shaley, poor breakout oil

230: Sand: grey, medium grained, speckled, greasy, still shaley, good  
breakout oil

231: Sand: medium grained, firm, very little to no shale, good breakout  
oil

234: SH: grey, gummy, no breakout oil

235: Sand: medium grained, little shale, good breakout oil

236: Sand: medium grained, good bleeding oil on samples, excellent  
breakout oil

237: Sand: small grained, shaley, Poor breakout oil

219-238: good show of oil in pit, 16 MCF, good breakout oil in places, but only  
about 1' of usable sand. All other sand is shaley and will be hard to produce.

239-248: SS: small to medium grained, speckled, SH: grey, green, and red,  
samples are greasy and still bleeding into the pit, but there is too much shale  
interbedded with the sand

249-258: SS: grey, medium grained, shaley, greasy

259-268: SS: grey, very gummy, greasy, very shaley

269-278: SS: grey, very shaley, coal growth, gummy, greasy

279-288: SH: grey, gummy, LS: occ.

289-298: SS: grey, Shaley, medium grained, very gummy

299-308: LS: brown, nodular, sandy appearance, SH: grey, gummy

**LEXINGTON COAL ZONE** Geologist called @310-313', gas kick of 100 units over BG



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SEP 03 2009

**\*\*GAS TEST @318', 100 MCF, 116 MCF open flow, 116 Total\*\***

310: SH: black, fair gas in samples  
309-318: LS: brown, sandy, SH: black, SS: grey, medium grained  
319-328: SS: grey, large grained, lots of quartz, Pyrite, SS: grey, small grained  
329-338: SS: lt grey, fine grained, gummy  
CG: 1600 units  
339-348: LS: beige to lt grey, SH: grey  
349-358: LS: lt grey, SH: 358: grey

**\*\*GAS TEST @358', 0 MCF, 108 open flow, 116 total MCF Total \*\***

CG: 1320 units

**SUMMIT SHALE ZONE** Geologist called @359-360', gas kick of 136 units over BG

**\*\*GAS TEST @370', 5 MCF, 113 open flow, 121 Total \*\***

359: SH: black fair gas in samples  
359-368: SH: grey, SH: black, Pyrite  
369-378: SH: grey, LS: black and tan, SH: black  
376-377: SH: dk grey/black, mixed with a tan, spotted LS

**MULKY COAL/SHALE ZONE** Geologist No call

**SQUIRREL SAND** Geologist called @379-448'

379-388: SS: lt grey, small grained, firm  
389-398: SS: lt grey, small grained, SS: tan, very firm, angular, like LS  
399-408: SS: small grained, no oil  
409-418: SS: small to medium grained, biotite, soft  
419-428: SS: small to medium grained, lots of biotite stringers, Pyrite  
429-438:  
The oil sand is below the sand with the biotite. I did not see a shale break  
436: SS: large grained, grey, good oil in pit, good breakout oil  
437: ""  
438: "" great breakout oil, firm, no biotite  
439: SS: lt grey, speckled, medium firmness, very good breakout oil, greasy samples  
440: SS: lt grey, medium grained, fair break out oil, firm, LS: tan  
441: SS: lt grey, medium grained, speckled, good breakout oil, firm  
442: SS: lt grey, medium grained, some firm, fair breakout oil, some soft, poor breakout oil  
443: SS: lt grey, medium grained, poor to fair breakout oil  
444: SS: lt grey, small to medium grained, poor to fair breakout oil  
445: SS: lt grey, lots of coal growth, medium grained, poor breakout oil  
446: SS: lt grey, speckled, firm, medium grained, fair to good breakout oil-black oil  
447: SS: lt grey, speckled, firm, medium grained, good to v. good breakout oil-black/tan oil, air bubbles with lots of oil  
448: SS: lt grey, firm, poor breakout oil, SS: dk grey, soft, no breakout oil

**BEVIER ZONE** - Geologist called at 451-452', gas kick of 0 units over bg

449-458: LS: lt grey, pyrite, SH: grey, Coal  
451-452: SH: black  
454-461: LS: lt grey

**CROWEBURG ZONE** Geologist called at 464-466', gas kick of 172 units over bg

459-468: LS: lt grey, SH: black, pyrite

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464-466: SH: black, gas kick of 172 units, fair gas in samples

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**FLEMING ZONE** Geologist called at 472', gas kick of 0 units over bg  
472: Coal

469-478: SH: grey, gummy, Coal, SS: white, large grained

479-488: SH: grey

489-498: SH: grey, dk grey

Finished drilling at 2:00pm

Total Rotary Depth, 499 on 8/6/2009

**\*\*GAS TEST @499', 13 MCF, 126 open flow, 134 MCF Total \*\***



# MIDWEST SURVEYS

- 20386

LOGGING - PERFORATING - CONSULTING SERVICES

P.O. Box 68, Osawatomie, KS 66064

913 / 755 - 2128

Received 9-3-2010

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File No.

Company Osborn Energy, LLC SEP 03 2009

Well Scott No. 1-23

Field Wildcat Mo Oil & Gas Council

County Bates State Missouri

Location 2150' FSL & 170' FEL

NE/4

33

Sec. 23 Twp. 42n Rge. 32w

Elevation

K.B. NA

D.F. NA

G.L. 1030'

Permanent Datum GL

Log Measured From GL

Drilling Measured From GL

8-21-2009

One

499.0

472.5

471.5

15.0

Full

Water

NA

NA

NA

0.0

107

Osawatomie

Steve Windisch

Jeff Taylor

8-21-2009

One

499.0

472.5

471.5

15.0

Full

Water

NA

NA

NA

0.0

107

Osawatomie

Steve Windisch

Jeff Taylor

8-21-2009

One

499.0

472.5

471.5

15.0

Full

Water

NA

NA

NA

0.0

107

Osawatomie

Steve Windisch

Jeff Taylor

8-21-2009

One

499.0

472.5

471.5

15.0

Full

Water

NA

NA

NA

0.0

107

Osawatomie

Steve Windisch

Jeff Taylor

8-21-2009

One

499.0

472.5

471.5

15.0

Full

Water

NA

NA

NA

0.0

107

Osawatomie

Steve Windisch

Jeff Taylor

8-21-2009

One

499.0

472.5

471.5

15.0

Full

Water

NA

NA

NA

0.0

107

Osawatomie

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Jeff Taylor

8-21-2009

One

499.0

472.5

471.5

15.0

Full

Water

NA

NA

NA

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107

Osawatomie

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Jeff Taylor

8-21-2009

One

499.0

472.5

471.5

15.0

Full

Water

NA

NA

NA

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107

Osawatomie

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Jeff Taylor

8-21-2009

One

499.0

472.5

471.5

15.0

Full

Water

NA

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NA

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107

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8-21-2009

One

499.0

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Full

Water

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107

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499.0

472.5

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Full

Water

NA

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One

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Full

Water

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Water

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One

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Water

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Water

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One

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Full

Water

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107

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8-21-2009

One

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472.5

471.5

15.0

Full

Water

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NA

NA

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107

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8-21-2009

One

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472.5

471.5

15.0

Full

Water

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NA

NA

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107

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One

499.0

472.5

471.5

15.0

Full

Water

NA

NA

NA

0.0

107

Osawatomie

Steve Windisch

Jeff Taylor

8-21-2009

One

499.0

472.5

471.5

15.0

Full

Water

NA

NA

NA

0.0

107

Database File: scot1-23.db  
Dataset Pathname: pass1  
Presentation Format: gr-n-ccl  
Dataset Creation: Fri Aug 21 09:04:12 2009 by Log Std Casedhole 07122  
Charted by: Depth in Feet scaled 1:240

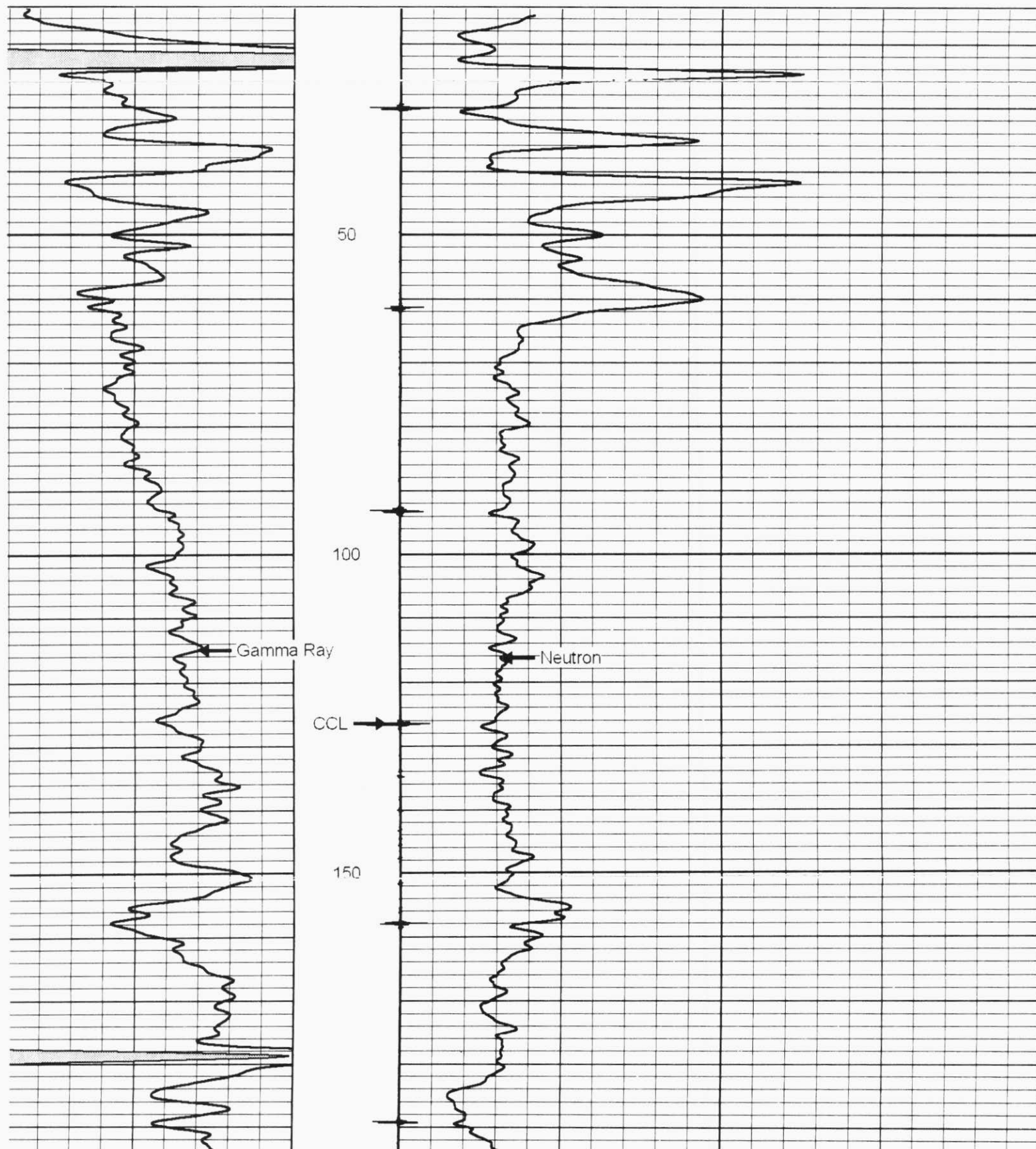
released  
SEP 03 2009  
Mo Oil & Gas Council

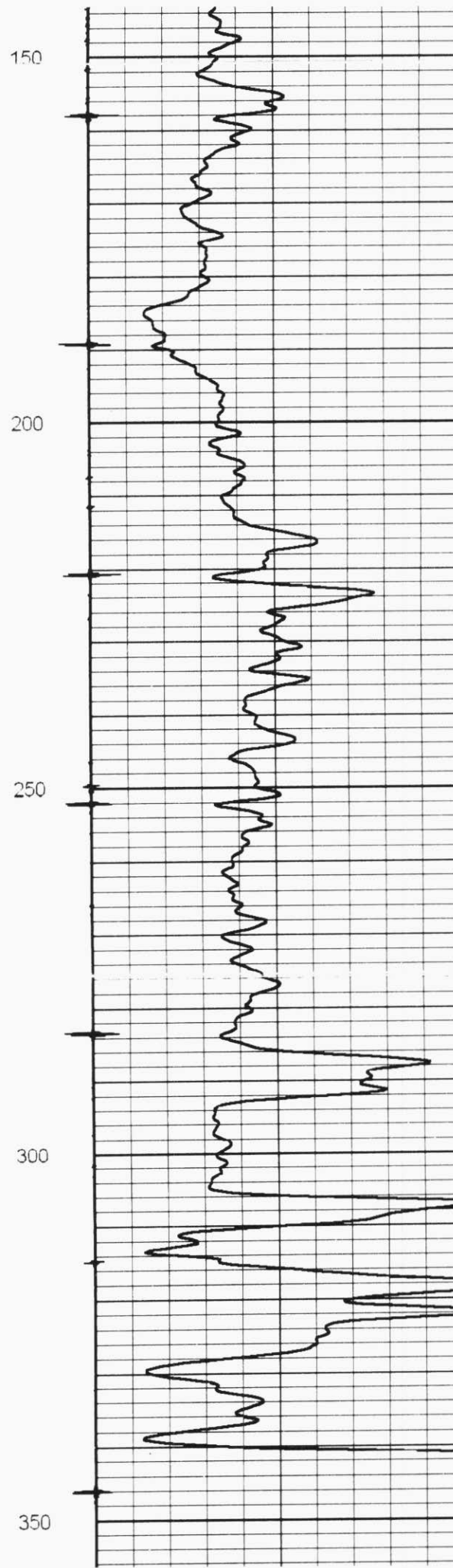
Gamma Ray (cps) 150

10

Neutron (cps)

2000





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until 9-3-2010



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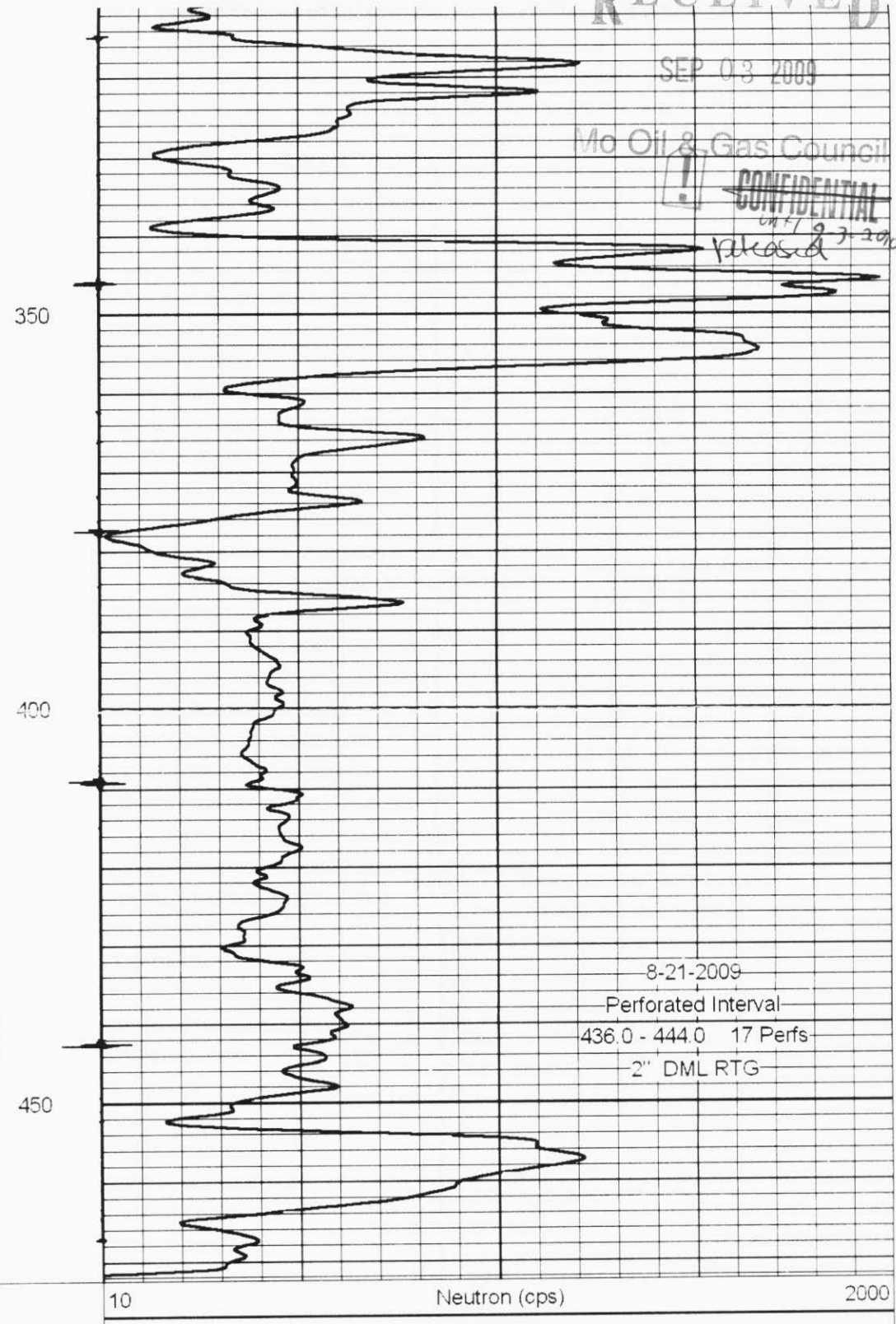
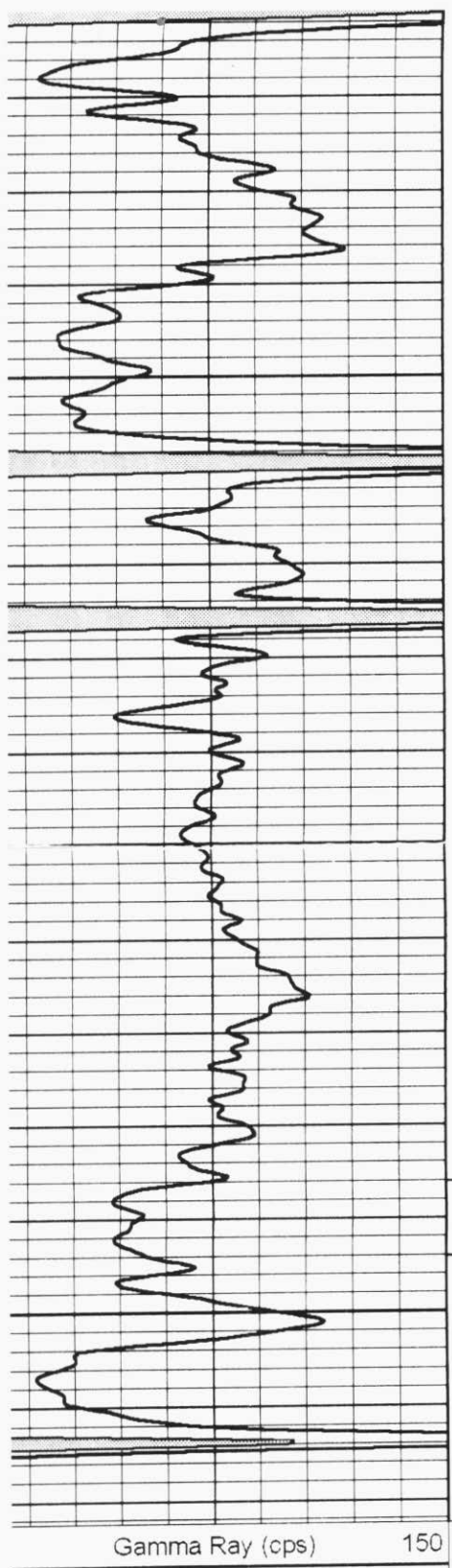
SEP 03 2009

Mo Oil & Gas Council



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CH 1 / 2 3-2009  
Released



8-21-2009  
Perforated Interval  
436.0 - 444.0 17 Perfs  
2" DML RTG



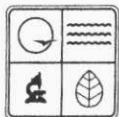
STATE OF MISSOURI  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**NOTICE OF INTENTION TO ABANDON WELL**

FORM OGC-6

|                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                    |                                                                                    |                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------|
| NAME OF LEASE<br><b>Scott</b> #20396                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                    | DATE<br>6/22/2010                                                                  |                 |
| WELL NUMBER<br>1-23                                                                                                                                                                                                                                                                                              | LOCATION<br>2150 ft from <input checked="" type="checkbox"/> North <input type="checkbox"/> South Section Line and 170 ft from <input checked="" type="checkbox"/> East <input type="checkbox"/> West Section Line |                                                                                    |                 |
| SECTION<br>23                                                                                                                                                                                                                                                                                                    | TOWNSHIP<br>42 North                                                                                                                                                                                               | RANGE<br>33 <input type="checkbox"/> East <input checked="" type="checkbox"/> West | COUNTY<br>Bates |
| THE ELEVATION OF THE GROUND AT WELL SITE IS<br>1030 FEET ABOVE SEA LEVEL                                                                                                                                                                                                                                         |                                                                                                                                                                                                                    | PERMIT NUMBER (OGC-3 OR OGC-31 NUMBER)<br>20386                                    |                 |
| NAME OF CONTRACTOR OR COMPANY THAT WILL DO WORK IS:<br>Consolidated Oil Well Services                                                                                                                                                                                                                            |                                                                                                                                                                                                                    |                                                                                    |                 |
| ADDRESS<br>1322 S. Grant PO Box 884                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                    | CITY<br>Chanute                                                                    | STATE<br>KS     |
| ZIP<br>66720                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |                                                                                    |                 |
| DETAILS OF WORK (INDICATE SIZE, KIND, AND DEPTH OF PLUGS, WHERE CASING WILL BE PULLED, OTHER PERTINENT DETAILS)<br>Pump cement from TD to surface. Plug to be completed 6/23/2010<br><br>Perforations from 436-444, 7" surface casing set at 20', 2 7/8" casing set at 476.58'                                   |                                                                                                                                                                                                                    |                                                                                    |                 |
| <p style="text-align: right; font-size: 1.5em; opacity: 0.5;">RECEIVED</p> <p style="text-align: right; font-size: 1.2em; opacity: 0.5;">JUN 22 2010</p> <p style="text-align: right; font-size: 1.2em; opacity: 0.5;">Mo Oil &amp; Gas Council</p>                                                              |                                                                                                                                                                                                                    |                                                                                    |                 |
| <b>CERTIFICATE:</b> I, the Undersigned, state that I am the agent of the <u>QELLC</u> (Company), and that I am authorized to make this report; and that this report was prepared under my supervision and direction and that the facts stated herein are true, correct and complete to the best of my knowledge. |                                                                                                                                                                                                                    |                                                                                    |                 |
| SIGNATURE<br><i>Cusson H. Hansen</i>                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                    | DATE<br>6.22.10                                                                    |                 |

RECEIVED

FORM OGC-7



STATE OF MISSOURI  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**PLUGGING RECORD**

JUL 21 2010

|                                                                                                                                                                       |                           |                                                                                                                |                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| OWNER'S NAME<br><b>Osborn Energy, LLC</b>                                                                                                                             |                           | ADDRESS<br><b>Mo Oil &amp; Gas Council</b><br><b>24850 Farley, Bucyrus, KS 66013</b>                           |                                                                                                 |
| NAME OF LEASE<br><b>Scott</b>                                                                                                                                         |                           | WELL NUMBER<br><b>1-23</b>                                                                                     | PERMIT NUMBER (OGC-3 OR OGC-31 NUMBER)<br><b>20386</b>                                          |
| LOCATION OF WELL SEC TWN RING OR BLOCK AND SURVEY<br><b>Sec. 23 Township 42 North Range 33 <input type="checkbox"/> East <input checked="" type="checkbox"/> West</b> |                           | LATITUDE                                                                                                       | LONGITUDE                                                                                       |
|                                                                                                                                                                       |                           | COUNTY<br><b>Bates</b>                                                                                         |                                                                                                 |
| APPLICATION TO DRILL THIS WELL WAS FILED IN NAME OF:<br><b>Osborn Energy, LLC</b>                                                                                     |                           | HAS THIS WELL EVER PRODUCED OIL OR GAS?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | CHARACTER OF WELL AT COMPLETION (INITIAL PRODUCTION)<br>OIL (BBL/DAY) _____ GAS (MCF/DAY) _____ |
|                                                                                                                                                                       |                           | DRY?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                                    |                                                                                                 |
| DATE OF ABANDONMENT<br><b>6/23/2010</b>                                                                                                                               | TOTAL DEPTH<br><b>499</b> | AMOUNT WELL PRODUCING PRIOR TO ABANDONMENT<br>OIL (BBL/DAY) _____ GAS (MCF/DAY) _____                          |                                                                                                 |
|                                                                                                                                                                       |                           | WATER (BBL/DAY) _____                                                                                          |                                                                                                 |

| Name of each formation containing oil or gas.<br>Indicate which formation open to well bore at time of abandonment | Fluid content of each formation | Depth interval of each formation | Size, kind, and depth of plugs used, giving amount of cement. |
|--------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------|---------------------------------------------------------------|
|                                                                                                                    |                                 |                                  | pump 20 sacks of 50/50 poz                                    |
|                                                                                                                    |                                 |                                  | cement with 15# cotton seed                                   |
|                                                                                                                    |                                 |                                  | hull from td to surface                                       |
|                                                                                                                    |                                 |                                  |                                                               |

| SIZE PIPE | PUT IN WELL (FT) | PULLED OUT (FT) | LEFT IN WELL (FT) | GIVE DEPTH AND METHOD OF PARTING CASING (SHOT, RIPPED, ETC.) | PACKERS AND SHOES |
|-----------|------------------|-----------------|-------------------|--------------------------------------------------------------|-------------------|
| 7"        | 21'              |                 | 21'               |                                                              |                   |
| 2 7/8"    | 476.58           | 476.58          | 0                 |                                                              |                   |
|           |                  |                 |                   |                                                              |                   |
|           |                  |                 |                   |                                                              |                   |
|           |                  |                 |                   |                                                              |                   |

WAS WELL FILLED WITH MUD-LADEN FLUID?

☐ Yes ☒ No

INDICATE DEEPEST FORMATION CONTAINING FRESH WATER

BKC

**NAME AND ADDRESSES OF ADJACENT LEASE OPERATORS OR OWNERS OF THE SURFACE**

| NAME | ADDRESS | DIRECTION FROM THIS WELL |
|------|---------|--------------------------|
|      |         |                          |
|      |         |                          |
|      |         |                          |
|      |         |                          |

**METHOD OF DISPOSAL OF MUD PIT CONTENTS**

Drilled with air and water, no mud. Let water evaporate, then filled pit with a backhoe

**NOTE**

FILE THIS FORM IN DUPLICATE WITH: (USE REVERSE SIDE FOR ADDITIONAL DETAIL)

**CERTIFICATE** I, the undersigned, state that I am the Agent of the OELLC (Company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

SIGNATURE

DATE

7-19-10

**DETAIL OF FORMATIONS PENETRATED**

| FORMATION | TOP | BOTTOM | DESCRIPTION (SEE * BELOW)                                                                                                                               |
|-----------|-----|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |     |        | <p>See the Geological Report</p> <p align="center"><b>RECEIVED</b></p> <p align="center">JUL 21 2010</p> <p align="center">Mo Oil &amp; Gas Council</p> |

**NOTE**

\* Show all important zones of porosity, detail of all cores, and all drill-stem tests, including depth interval tested, cushion used, time tool open flowing and shut-in pressures, and recoveries.

**INSTRUCTIONS**

Attach drillers log or other acceptable log of well if available.  
 This Well Completion or Recompletion report and well log shall be filed with the Missouri State Geologist not later than 30 days after project completion.

## Geological Report

RECEIVED

JUL 21 2010

Mo Oil & Gas Council

**Scott # 1-23**

2150 FNL, 170 FEL

**Section:** 23-T42-R33W

NE4

Bates Co., Missouri

**Permit #:** 20386

**Elevation:** 1030' GL

**Drilling Contractor:** Osborn Energy, L.L.C (Lic. # 32294)

**Spud:** 8/5/2009

**Production Bore Hole:** 6 1/4"

**Rotary Total Depth:** 499 on 8/6/2009

**Drilling Fluid:** air

**Surface Csg.:** 7"

**Production Csg.:** 2 7/8" 476.58'

**Geologist:** Curstin Hamblin

**Driller:** Brian Schwab

| <u>Formation</u>                 | <u>Geo Tops</u> | <u>Log Tops</u> | <u>Datum</u> |
|----------------------------------|-----------------|-----------------|--------------|
| Stark Shale                      | None            | Absent          |              |
| Hushpuckney Shale                | None            | 21-24           | 1009         |
| Base Kansas City                 | No call         | 41              | 989          |
| Knobtown Sand                    | 49              | 49-67           | 981          |
| Carbonaceous Zone in Tacket Fm.  | No call         |                 |              |
| "Big Lake" Sand                  | NO call         | 155-159         | 875          |
| South Mound Zone                 | 151'            | 178-180         | 852          |
| Hepler (Wayside) Sand            | No call         | 215-238         | 815          |
| "Upper" Mulberry Zone            | No call         |                 |              |
| Mulberry Zone                    | No call         |                 |              |
| Weiser Sand                      | No call         |                 |              |
| Myrick Station                   | 307-309'        | 306-310         | 724          |
| Anna Shale (Lexington Coal Zone) | 310-313'        | 310-313         | 720          |
| Peru Sand                        | No call         |                 |              |
| Summit Shale Zone                | 359-360'        | 358-361         | 672          |
| Mulky Coal/Shale Zone            | No call         | 374-380         | 656          |
| Lower Squirrel Sand              | 379-348'        | 432-449         | 598          |
| Bevier Zone                      | 451-452'        |                 | 579          |
| Croweburg Zone                   | 464-466'        | 463-465         | 567          |
| Fleming Zone                     | 472             |                 | 558          |
| Rotary Total Depth               | 499'            |                 |              |

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Drilling at 39' in the Kansas City on 8/6/2009 at 6:30am  
Background Gas (BG) 18.9 units

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\*\*\*Log tops are in ( ) below

39-48: LS: white, tan, SS: lt grey, small grained, partially gummy

BKC: 41

**Knobtown Sand: 49-67**

49-58: SS: lt grey, small grained, gummy  
59-68: SS: grey, small grained, gummy, speckled  
69-78: SS: grey, very small grained, speckled  
79-88: SS: very fine grained, gummy, Pyrite  
89-98: Siltstone: grey, gummy  
99-108: Siltstone: grey, gummy  
109-118: SH: grey, gummy  
119-128: SH: grey, gummy  
129-138: SH: grey, gummy  
139-148: SH: grey, gummy

**SOUTH MOUND ZONE** Geologist called @151' (178-180), gas kick of 0 units over BG

149-158: SS: grey, small grained, SH: grey, gummy  
151: SH: dk grey (south Mound?)  
159-168: SH: grey, gummy, silty, SS: small grained, tan, angular  
169-178: SH: red, SH: grey  
179-188: SH: grey, sandy, gummy  
189-198: SH: grey, SH: red  
199-208: SH: grey, gummy, silty  
209-218: SS: grey, gummy, small grained  
CG: 60 units  
Switching to water before we drill into the oil

**Hepler/Wayside Sand: 215-238**

219-238:  
223: Sand  
224: Sand, very poor breakout oil, greasy  
225: Sand: grey, medium grained, greasy, Shaley, poor breakout oil  
230: Sand: grey, medium grained, speckled, greasy, still shaley, good  
breakout oil  
231: Sand: medium grained, firm, very little to no shale, good breakout  
oil  
234: SH: grey, gummy, no breakout oil  
235: Sand: medium grained, little shale, good breakout oil  
236: Sand: medium grained, good bleeding oil on samples, excellent  
breakout oil  
237: Sand: small grained, shaley, Poor breakout oil

219-238: good show of oil in pit, 16 MCF, good breakout oil in places, but only  
about 1' of usable sand. All other sand is shaley and will be hard to produce.

239-248: SS: small to medium grained, speckled, SH: grey, green, and red,  
samples are greasy and still bleeding into the pit, but there is too much shale  
interbedded with the sand

249-258: SS: grey, medium grained, shaley, greasy



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259-268: SS: grey, very gummy, greasy, very shaley  
269-278: SS: grey, very shaley, coal growth, gummy, greasy  
279-288: SH: grey, gummy, LS: occ.  
289-298: SS: grey, Shaley, medium grained, very gummy  
299-308: LS: brown, nodular, sandy appearance, SH: grey, gummy

**LEXINGTON COAL ZONE** Geologist called @310-313' (310-313), gas kick of 100 units over BG

**\*\*GAS TEST @318', 100 MCF, 116 MCF open flow, 116 Total\*\***

310: SH: black, fair gas in samples  
309-318: LS: brown, sandy, SH: black, SS: grey, medium grained  
319-328: SS: grey, large grained, lots of quartz, Pyrite, SS: grey, small grained  
329-338: SS: lt grey, fine grained, gummy  
CG: 1600 units  
339-348: LS: beige to lt grey, SH: grey  
349-358: LS: lt grey, SH: 358: grey

**\*\*GAS TEST @358', 0 MCF, 108 open flow, 116 total MCF Total \*\***

CG: 1320 units

**SUMMIT SHALE ZONE** Geologist called @359-360' (358-361), gas kick of 136 units over BG

**\*\*GAS TEST @370', 5 MCF, 113 open flow, 121 Total \*\***

359: SH: black fair gas in samples  
359-368: SH: grey, SH: black, Pyrite  
369-378: SH: grey, LS: black and tan, SH: black  
376-377: SH: dk grey/black, mixed with a tan, spotted LS

**MULKY COAL/SHALE ZONE** Geologist No call (374-380)

**SQUIRREL SAND** Geologist called @379-448' (432-449)

379-388: SS: lt grey, small grained, firm  
389-398: SS: lt grey, small grained, SS: tan, very firm, angular, like LS  
399-408: SS: small grained, no oil  
409-418: SS: small to medium grained, biotite, soft  
419-428: SS: small to medium grained, lots of biotite stringers, Pyrite  
429-438:  
The oil sand is below the sand with the biotite. I did not see a shale break  
436: SS: large grained, grey, good oil in pit, good breakout oil  
437: ""  
438: "" great breakout oil, firm, no biotite  
439: SS: lt grey, speckled, medium firmness, very good breakout oil, greasy samples  
440: SS: lt grey, medium grained, fair break out oil, firm, LS: tan  
441: SS: lt grey, medium grained, speckled, good breakout oil, firm  
442: SS: lt grey, medium grained, some firm, fair breakout oil, some soft, poor breakout oil  
443: SS: lt grey, medium grained, poor to fair breakout oil  
444: SS: lt grey, small to medium grained, poor to fair breakout oil  
445: SS: lt grey, lots of coal growth, medium grained, poor breakout oil  
446: SS: lt grey, speckled, firm, medium grained, fair to good breakout oil-black oil  
447: SS: lt grey, speckled, firm, medium grained, good to v. good breakout oil-black/tan oil, air bubbles with lots of oil

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448: SS: lt grey, firm, , SS: dk grey, soft, no breakout  
oil

**BEVIER ZONE** - Geologist called at 451-452', gas kick of 0 units over bg

449-458: LS: lt grey, pyrite, SH: grey, Coal

451-452: SH: black

454-461: LS: lt grey

**CROWEBURG ZONE** Geologist called at 464-466' (463-465), gas kick of 172 units  
over bg

459-468: LS: lt grey, SH: black, pyrite

464-466: SH: black, gas kick of 172 units, fair gas in samples

**FLEMING ZONE** Geologist called at 472', gas kick of 0 units over bg

472: Coal

469-478: SH: grey, gummy, Coal, SS: white, large grained

479-488: SH: grey

489-498: SH: grey, dk grey

Finished drilling at 2:00pm

Total Rotary Depth, 499 on 8/6/2009

**\*\*GAS TEST @499', 13 MCF, 126 open flow, 134 MCF Total \*\***